

# Your feet can tell a story

By Audrey Wall



**F**eet. Often overlooked and underappreciated, our feet are vital to our mobility, quality of life and even survival. Comprised of 26 bones, two sesamoid bones, 33 joints, 19 muscles and 107 ligaments each, feet have been referred to as a perfect marriage of form and function; examples of exquisite engineering designed to propel, pivot and take us where we want to go.

The skin on our feet may look quite ordinary, but in reality it is a complex marvel of fat pads, pores and blood vessels, all working to ensure that every step we take is balanced and evenly pressured. The tightly stretched sole of the foot contains

the thickest skin in the human body. It is criss-crossed by a set of creases that react to pressure from walking and standing, and includes as many as 200,000 extremely sensitive nerve endings, which explains why it hurts to step on a pebble and why feet can be ticklish!

Toenails, nature's great protectors, are intricate wonders, incorporating multiple layers of protein-rich tissue, a growth-promoting matrix and several delicate membranes designed to protect against and prevent bacterial invasion and infection. Functioning to protect the ends of our toes from injury, toenails enhance the delicate sensation exerted on our toes when we walk or stand. Toenails grow slowly, at approximately 1 mm per month.

Feet speak a very special language—one of pressure, friction and shear forces, as well as environmental factors, to which they respond in a number of specific ways.

## Calluses

Calluses, a common response to repeated pressure on particular areas on the foot, are made up of tough skin cells and appear in many

different shapes and sizes. While they are generally not harmful on their own, regular attention to calluses helps minimize their growth, and keeps them from becoming painful or leading to other problems such as skin ulceration or infection. The gentle, occasional use of a pumice stone lubricated with soap on calluses, together with the daily application of callus cream, can make a significant difference to their size.



## Corns

Corns are usually round and form on the thin, smooth surfaces of feet.

Funnel-shaped, with the wider area on the skin's surface and the point down in the tissue, corns can be irritating and painful. Reducing the pressure at the corn's location with specially designed toe separators, or applying a non-medicated corn pad, will help to minimize the pain and continued growth of the corn.

## Athlete's foot

Athlete's foot is a fungal infection that usually appears as patchy, peeling, itchy skin on the sole and between the toes. Sparing application



“The skin on our feet may look quite ordinary, but in reality it is a complex marvel of fat pads, pores and blood vessels.”

of medicated foot powder will help reduce itching and the progression of this condition. When the skin between the toes looks white, thicker and cracked then it's time to seek medical attention.



Treatment with a prescription antifungal cream will help; untreated athlete's foot can lead to a toenail fungus.

Fungi adore a warm, dark, moist environment, so keep those feet dry!

### Ingrown toenails

Ingrown toenails arise in several ways, such as a sliver of nail piercing the skin or the skin growing over the nail. Either way, it's painful! Poorly fitting or too-tight footwear, cutting into the skin at the edge of the nail, or picking at the nail can all produce ingrowing nails. Infection can occur if the area isn't kept clean. Conservative management includes short, warm, salt-water soaks, gentle drying and applying an antibacterial ointment. Never dig or cut into the nail or the skin around it. If the toenail is deeply ingrown then surgical treatment may be necessary.

### Toenail fungus

Toenail fungi affect up to 50 per cent of the population older than 70 years of age and up to one third of people with diabetes. Mistakenly considered a purely cosmetic concern, an unchecked fungal infection will relentlessly push on until the nail plate is destroyed, and can trigger additional infectious lesions in the body. The infection can start as a yellow “blob” on the nail, but fungi will generally thicken, yellow and crumble the toenail. Treatment options include the daily application of a topical antifungal, photodynamic therapy (not very effective) and oral tablets, which require medical monitoring of liver function. Be wary of any treatments suggesting the application of vinegar, acids or “natural” remedies—the research around these modalities is still in its infancy. A discussion with your health-care provider will help diagnose and provide treatment for this condition. Topical treatment requires diligence and persistence—sometimes up to a year of daily treatment—and is less expensive than photodynamic therapy, a newer, shorter treatment option.

## Your foot-care team

A family doctor or nurse practitioner will diagnose and treat skin/foot concerns, and can refer you to dermatologist/plastic surgeon for specialty care.

A registered chiropodist/podiatrist is a specialized postgraduate in advanced foot care. These practitioners are registered with the provincial/territory College of Chiropodists and will charge a fee for their services. No referral is required. Chiropodists/podiatrists can perform specialized surgical procedures and have limited prescribing authority. They may sell footwear, custom orthotics, compression stockings and foot-care supplies.

A foot-care nurse is a registered nurse or a registered/licensed practical nurse with advanced education and skills in foot care. These practitioners will be registered with the provincial/territory College of Nurses and generally charge a fee for their services. No referral is required.

Foot-care nurses are not able to prescribe or diagnose and do not perform nail/foot surgical procedures. However, they may provide home visits or have a clinic.



### Caring for your feet

Gentle, regular care of your feet is important; never, ever use a knife, blade or workshop tool on your feet! Your feet

are precious and not to be taken for granted. An average person will walk approximately 178,000 km in a lifetime—almost five times around the Earth at the equator. Love your feet and they'll love you back. 

*Audrey Wall, RN, BScN (Hons), is a volunteer provincial advisor for Ontario with the Canadian Association of Foot Care Nurses, and currently practices within a family health team in the Niagara region.*